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IB Biology Ecology Inquiry – Part 1

Complete the following working as a class.

1) Define the autotrophic method of nutrition. (What is an autotroph?)

2) List two different types of autotrophs.

3) Define the heterotrophic method of nutrition (What is a heterotroph?)

4) List four different types of heterotrophs.

NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

IB Biology Ecology Inquiry – Part 2

Complete the following working with your group.

Define the following terms:

*Producer*

*Primary Consumer*

*Secondary Consumer*

*Tertiary Consumer*

*Quaternary Consumer*

*Decomposer*

*Saprotroph*

*Detritivore*

*Herbivore*

*Carnivore*

*Omnivore*

11th IB Biology – Ecology Inquiry – Part 3

For this part of the inquiry you will be working with your group to investigate an ecosystem and create a food web and energy diagram based on your particular ecosystem. In order to do this you must complete the following:

1) Investigate and describe your ecosystem:

Take some time to investigate your ecosystem. You should be able to describe the important features of your ecosystem. Where would you find this ecosystem? What are the conditions such as weather, temperature, pressure, climate, rainfall that are important in your ecosystem? What makes this ecosystem unique?

2) Identify and describe some of the organisms that live in your ecosystem:

What organisms live in your ecosystem? Identify as many organisms as you can. DO NOT focus only on big, obvious, animals! You should also include things like plants, algae, protists, fungi, bacteria (if they are important). What can you find out about each organism? Can you find pictures of each organism?

3) Identify the role of each organism in your ecosystem and the interactions between organisms:

Which organisms are *autotrophs*? Which organisms are *heterotrophs*? (refer to Part 1) Identify the producers, different consumers, decomposers *etc* (refer to Part 2). Are any of the organisms on multiple levels? What is the relative abundance of each type of organism?

4) Create a visual representation of the food web and energy pathway in your ecosystem:

Using the information you have discovered, create a visual representation of the food web and energy pathway in your ecosystem. You can draw, use pictures, graphics. You must include proper labels. You may look online for ideas on how to best complete and present this information but you must create your own food web.

5) Present your food web to the class:

Your group will briefly present the description of the ecosystem as well as your food web. You should keep this in mind when deciding how to create your visual representation.